

The Quadratic Formula

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$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$3x^2 - 8x = -4$$

$$3x^2 - 8x + 4 = 0 \quad \text{put into standard form}$$

$$x = \frac{-(-8) \pm \sqrt{(-8)^2 - 4(3)(4)}}{2(3)} \quad \text{substitute numbers into formula}$$

$$x = \frac{-(-8) \pm \sqrt{64 - 4(3)4}}{2(3)}$$

$$x = \frac{-(-8) \pm \sqrt{64 - 48}}{2(3)}$$

$$x = \frac{-(-8) \pm \sqrt{16}}{6}$$

$$x = \frac{-(-8) \pm 4}{6}$$

$$x = \frac{8 \pm 4}{6} \quad \text{there are two answers}$$

$$x = \frac{12}{6} = 2 \quad \text{and} \quad x = \frac{4}{6} = \frac{2}{3} \approx 0.667 \text{ rounded}$$